BEFORE THE

STATE CORPORATION COMMISSION

OF VIRGINIA

Application of	)	
	)	
Verizon Virginia Inc.	)	**Case No. PUC-2007-______**
and	)	
Verizon South Inc.	)	
	)	
For a Determination that Retail Services Are	)	
Competitive and Deregulating and Detariffing	)	
of the Same	)	

VIRGINIA BEACH-NORFOLK-NEWPORT NEWS (VNN) EXHIBITS

PUBLIC VERSION

Virginia Beach-Norfolk-Newport News (VNN) Exhibits

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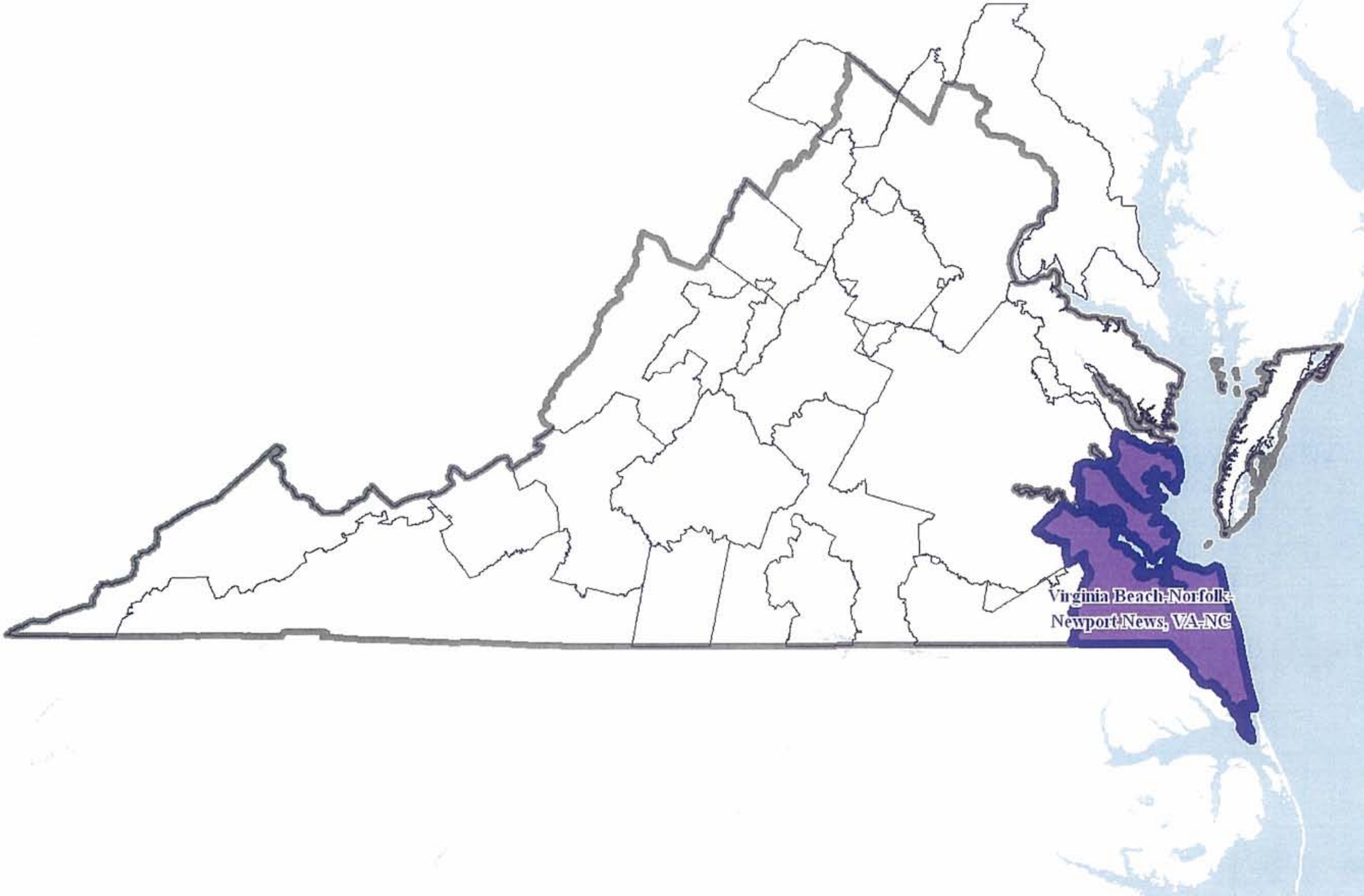
VNN-1

Virginia Beach MSA



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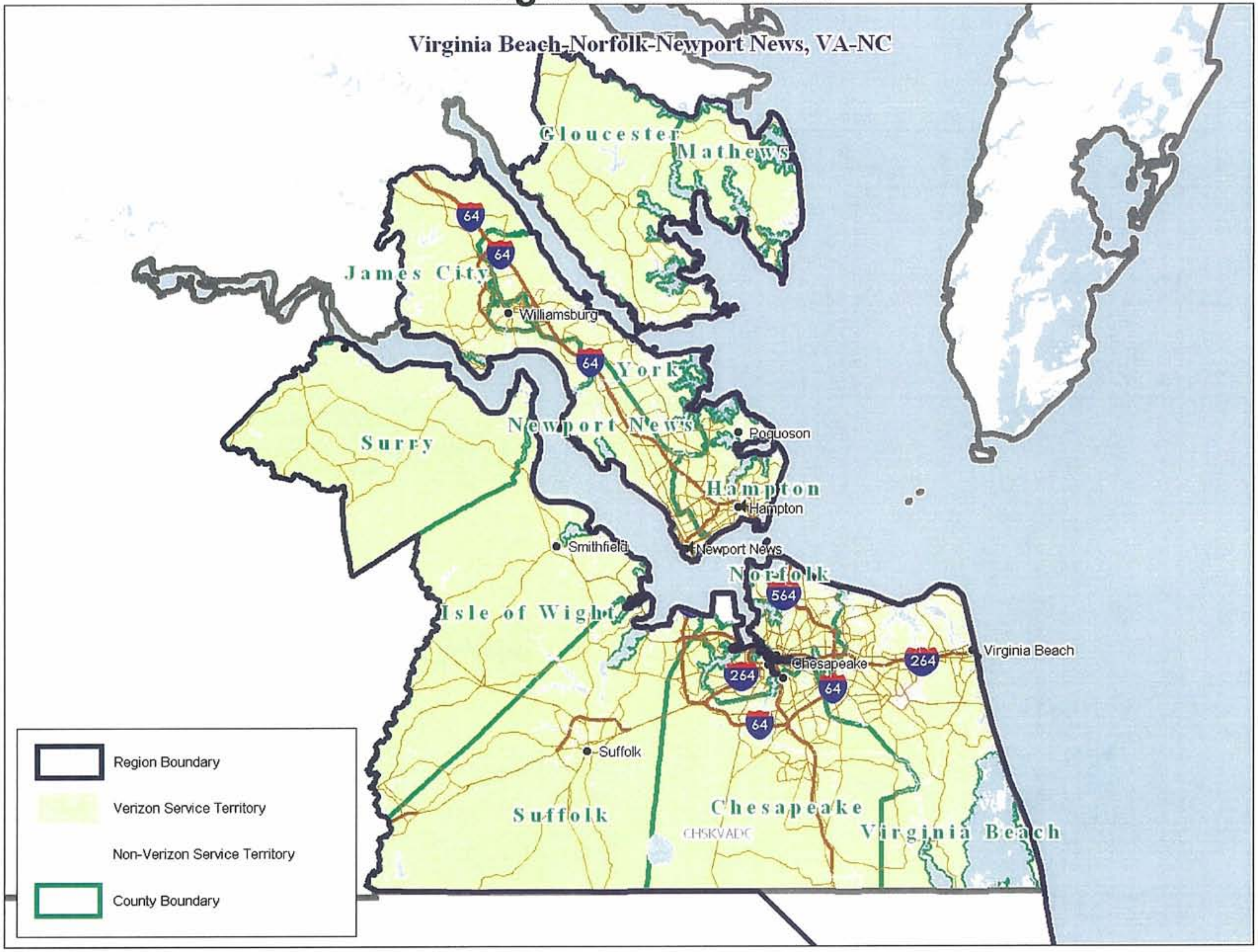
Virginia Beach MSA



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Virginia Beach MSA

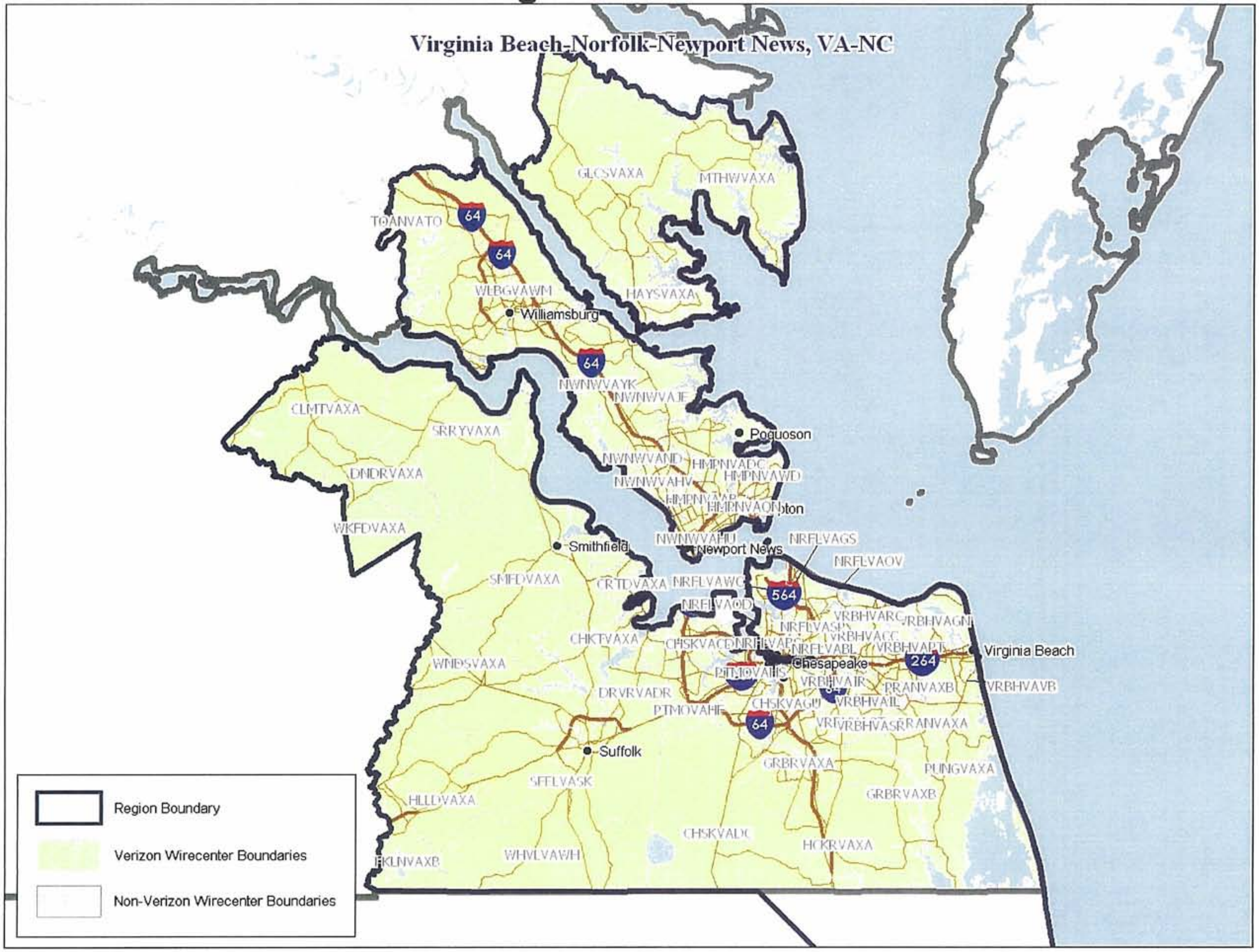

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Exhibit VNN-2

COMPETITION AND POTENTIAL COMPETITION FOR RETAIL TELECOMMUNICATIONS SERVICES IN VERIZON'S VIRGINIA BEACH-NORFOLK-NEWPORT NEWS MSA SERVICE TERRITORY

Report of Jeffrey A. Eisenach, Ph.D.
January 17, 2007

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I. OVERVIEW

Verizon's service territory in the Virginia Beach-Norfolk-Newport News ("VNN") MSA consists of 2,324 square miles, with a population of 1,576,343 living in 602,998 households as of 2006; there are 55,097 business establishments.[1] The average population density is 678 residents per square mile, and the median household income is $54,075.[2] Verizon operates 51 wire centers in the MSA.[3]

The VNN MSA is located in the 757 and 804 area codes. It is bordered by the Northern Neck region in the northeast, by the Richmond MSA in the northwest and west, by the Southside region in the Southwest, by North Carolina in the South, and by the Chesapeake Bay and the Atlantic Ocean on the east. It is a mix of urban and rural areas, and includes such rural counties as Gloucester and Mathews, in the north, and Chesapeake and Suffolk in the south, as well as urban areas such as Norfolk and Newport News and vacation spots such as Virginia Beach and Williamsburg.[4]

Of its 51 wire centers, 24 have population densities in excess of 2,000 people per square mile. Its most sparsely populated wire center, Dendron in Suffolk County, has only 26 persons per square mile.[5]

Competition for telecommunications services is intense throughout the VNN MSA. Facilities-based wireline competition is extensive throughout the region, both from traditional CLECs such as **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** and from cable telephony **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL] of all wireline telephone lines are now served by carriers other than Verizon, and the percentage is growing rapidly.

Mobile wireless coverage is ubiquitous, and mobile broadband services are available from Sprint as well as from Verizon. Nearly one out of four people consider their cell phone to be their primary telephone.

With respect to broadband, nearly all customers (96 percent) have access to cable modem service, and fixed wireless broadband is also available. In response to the intense competition, Verizon has begun to roll out its FiOS FTTP service to much of the region.

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1. *See* Exhibit VNN-4.
2. *See id.*
3. *See* Exhibit VNN-3. **[BEGIN CONFIDENTIAL]**

   [END CONFIDENTIAL]
4. *See* Exhibit VNN-1.
5. *See* Exhibit VNN-4.
6. *See* Exhibit VNN-15.

There are no barriers to entry. Recently there has been significant entry, and more is expected. For example, Cox has entered the market with cable telephony service, and now offers telephone services to nearly 90 percent of the households in the region. Both Charter and Comcast (which recently purchased Adelphia's cable system in the region) are expected to deploy cable telephony in the near future. Cavalier, which has just won approval to deploy its triple play offering in Williamsburg, has announced plans to roll the service out "the balance of Hampton Roads."[7] In addition, new broadband providers, including providers utilizing fixed wireless technologies, have recently entered, and more entry is expected.

The analysis below of the availability and usage of existing alternative services, and of the conditions associated with potential competition and new entry, demonstrates that competition already regulates the prices of Verizon's retail telephony services in the VNN MSA, and that further entry and even more intense competition lie ahead.

II. AVAILABILITY OF ALTERNATIVE SERVICES

All 602,998 households in the VNN region and all 55,097 businesses in the VNN MSA have the option to obtain alternatives to Verizon's BLETS, OLETS and Bundled Services from competitive providers. Facilities-based competition is ubiquitous, with multiple, overlapping facilities-based providers in much of the region, including both traditional CLECs and cable providers. Mobile telephone service is ubiquitous, and broadband service is nearly so.

A. Traditional CLECs[8]

Traditional CLECs provide robust competition throughout the VNN MSA, and facilities-based competition is widespread.

Based on Verizon's E911 data, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][11]

Cavalier, which has **[BEGIN CONFIDENTIAL]**

7. Press Release, Cavalier, Richmond-bases Communications Company expands into Williamsburg with its Digital TV Service (Oct. 17, 2006), *available at* http://www.cavtel.com/company/press/2006_10_17.shtml.

8. Here and in the remaining sections of this report, unless otherwise indicated, "traditional CLEC" refers to CLECs other than cable companies. "CLEC" refers to both traditional CLECs and cable companies.

9. *See* Exhibit VNN-15 and Exhibit VNN-17. The E911 data includes lines that are unable to be assigned to a wire center. These unassignable lines are included in the aggregate competition information. This leads to some under representation of E911 lines when broken out by wire center. E911 data for the City of Virginia Beach is as of March 2005. All other E911 data is as of March 2006.

10. *See* Exhibit VNN-14.

11. *See* Exhibit VNN-4 and Exhibit VNN-15.

[END CONFIDENTIAL] has recently received approval to roll out its "triple play" service, offering over 150 channels of video, plus high-speed broadband and a fully voice bundle, for $95.95 per month.[12] Cavalier's product relies on fiber connections to central offices and delivery of video using MPEG-4 compression technology[13] over last-mile copper UNEs leased from Verizon. Cavalier's offering places the company in direct competition with Comcast and the other cable companies, as well as Verizon, which has recently begun rolling out its own triple-play offering using Direct TV and has announced plans to begin using its FiOS technology by year end.

In addition, all households and businesses in the VNN MSA can receive service from traditional CLECs through resale and/or Wholesale Advantage services available from Verizon.[14] As of March 2006, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

Altogether, a total of **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][17]

B. Cable Telephony

Three cable companies serve the VNN MSA, Comcast (which acquired the former Adelphia franchise territory), Charter, and Cox.[18] Cox's service territory includes 89.5 percent of the households, while Comcast's service territory includes only 0.7 percent of households and Charter's service territory includes 6.8 percent of households.[19] Cox offers cable telephony throughout the vast majority of its service territory.[20] Comcast and Charter have infrastructures that are capable of providing cable telephony service, and both companies have announced plans

12. *See* Cavalier, Triple Play, http://www.cavtel.com/broadbandtv/packages.shtml (last visited Nov. 20, 2006).
13. *See* Cavalier, Broadband TV, http://www.cavtel.com/broadbandtv/how_it_works.shtml (last visited Nov. 20, 2006).
14. *See* Exhibit VNN-16.
15. *See* Exhibit VNN-15.
16. *See id.*
17. *See* Exhibit VNN-14.
18. *See* Exhibit VA-10 and Exhibit VNN-7.
19. *See id.*
20. *See* Exhibit VA-10 and Exhibit VNN-9.

to deploy cable telephony in the very near future.[21] Thus, 88.9 percent of households currently have access to cable telephone service, and 96.4 percent will have cable telephony once Charter and Comcast complete their deployments.

C. Mobile Telephony

Of the 602,998 households in the VNN MSA, all but 799 (0.1 percent) have access to at least two CMRS providers.[22] In addition to Verizon Wireless, there are five CMRS providers offering retail telephone services in the VNN MSA. They are Alltel, Cingular, NTELOS, Sprint, and T-Mobile.[23]

There are 519 cellular towers in the VNN region.[24] Of these, 49 have been constructed since 2004.[25] There is at least one cellular tower located in the area served by 50 of the 51 Verizon wire centers.[26]

D. Broadband and VoIP

Increasingly, consumers are choosing to combine stand-alone broadband Internet access with VoIP services provided by "bring your own access" companies such as Vonage, thus creating their own bundles of broadband and retail telephony services. Both broadband and VoIP services are available to almost all VNN households and businesses.

Cable Modem and DSL Service: Two cable providers, Charter and Cox, offer cable modem service throughout their service territories in the VNN MSA,[27] serving 96.4 percent of all residences.[28] In addition, Verizon makes DSL service without voice available to retail customers for $26.99 per month, and FiOS service without voice is available for $39.95 per month. DSL service is available to **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** of households.[29]

Fixed Wireless Service: In addition to wireline cable modem, DSL and FiOS service, three quarters of households (75 percent) have access to fixed wireless broadband services.[30] Providers include:

- AccessNet: AccessNet services the VNN MSA, including rural portions of James City, Hampton, Newport News, and York counties.[31] The company offers fixed

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21. *See* West Testimony at 42. *See* Comcast, FAQ, https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3804 (last visited Dec. 3, 2006); *id.* at https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3807 (last visited Dec. 3, 2006).
22. See Exhibit VNN-12.
23. *See* Exhibit VNN-11.
24. *See* Exhibit VNN-10.
25. *See id.*
26. *Compare* Exhibit VNN-3 and Exhibit VNN-10.
27. *See* Exhibit VA-10 and Exhibit VNN-8.
28. *See id.*
29. *See* Exhibit VA-4.
30. *See id.*

wireless broadband services backed by its own fiber backbone.[32] Services are either Broadband Class for small corporate users (billed as 40 or fewer workstations) with dedicated service up to 1.5 Mbps.[33] Carrier Class provides dedicated service from 2 Mbps up to 1 Gbps for high bandwidth corporate clients.[34] Price is a function of the number of computers attached, ranging from $99.95 for 1-3, $199.99 for 4-10, and $299.99 for 11-20 computers.[35]

- Broadnet/Atrius: Broadnet/Atrius services the VNN MSA, including most of the Norfolk, Portsmouth, Virginia Beach, and Chesapeake Metropolitan areas. The company can deliver up to 4.5 Mbps or the equivalent of three T1 connections.[36]

- Continental VisiNet: Continental VisiNet offers fixed wireless broadband services in the region, aimed primarily at business customers. Packages range from 256 Kbps up to 17 Mbps; pricing is available only upon request.[37]

While none of the firms discussed above offer bundles that include VoIP services, customers have the option of purchasing alternatives to Verizon's BLETS, OLETS and Bundled Services from by-pass VoIP companies. VoIP providers that offer telephone numbers in the 757 and 804 area codes include at&t, Packet8, Net2Phone, and Vonage.[38]

E. Overall Availability of Alternative Platforms and Competitors

Looking overall at the availability of service from alternative platform providers (i.e., from mobile wireless, cable modem, DSL, facilities-based CLECs, and fixed wireless), 100 percent of all households in the VNN MSA have service available from at least one alternative platform provider and 87 percent have service from four or more alternative platforms.[39]

Similarly, looking overall at the availability of service from all competitors – i.e., the same measure as above, but counting each competitor separately (e.g., counting each CMRS provider separately), competition is even more extensive: 100 percent of households have competitive alternatives from at least two competitors, and 94 percent have access to service from eight or more Verizon competitors.[40]

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31. AccessNet, AccessNet Wireless, http://www.accessnet.com/services/wireless_map.htm (last visited July 20, 2006).
32. *See id.* at http://www.accessnet.com/services/wireless.htm (last visited July 20, 2006).
33. *See id.*
34. *See id.*
35. *See id.*
36. Atrius, Broadnet Service, http://www.atrius.us/broadnet.php (last visited Nov. 21, 2006).
37. *See* Continental VisiNet, Business Solutions, http://www.visi.net/business/wireless.html (last visited Nov. 21, 2006).
38. *See* West Testimony at 81.
39. *See* Exhibit VA-4 and Exhibit VNN-5.
40. *See* Exhibit VA-5 and Exhibit VNN-6.

III. USAGE OF ALTERNATIVE SERVICES

Verizon's internal data shows that at least **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** of wireline telephone lines in the VNN region were being served by competitors as of March 2006, and past trends would indicate that that proportion would have increased in the intervening months. However, these figures understate the true market share of competitors, since they fail to account for intermodal competition, such as from wireless and broadband.

Survey data indicates that **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL] of households subscribe to broadband. Taking intermodal competition into account, the data presented below show that Verizon voice lines now account for only 19.3 percent of all wireline telephony, wireless telephony and broadband connections in the region.

Time series data presented at the end of this section also shows that Verizon's wireline market share is falling, both in proportion to the number of wirelines served and relative to the number of households in the region. Taken together, the data presented in detail below demonstrates that the competitive alternatives described in Section II represent viable alternatives for Verizon's BLETS, OLETS and Bundled Services in the VNN region, since customers are actually switching to them in large numbers.

A. Traditional CLECs and Cable Telephony

As detailed in Exhibit VNN-15, a total of **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][43]

It is notable that **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

The figures for overall wireline competition are consistent with the survey data presented by Mr. Newman, which shows that **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** of residential customers in the VNN MSA are using providers other than

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41. This figure does not include approximately six percent of the population (who by definition were not reached through Verizon's telephone survey) who have cut the cord altogether. *See* West Testimony at p. 63, n. 84.
42. *See* Exhibit VNN-15.
43. *See* Exhibit VNN-19.

Verizon.[44] In large MSAs (including the VNN MSA), the survey data shows that 27.0 percent of POTS business customers and 37.6 percent of all business customers are using other providers.[45]

Exhibit VNN-15 also demonstrates that wireline competition is ubiquitous throughout the VNN MSA. It shows that competitors are actually serving both business and residential customers in **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** wire centers in the VNN region, including the smallest and most rural wire centers.[46] Facilities-based wireline competition, from cable companies using only their own facilities and/or traditional CLECs using a combination of their own facilities and, at most, Verizon's last mile facilities, is also nearly ubiquitous: facilities-based competitors are serving customers in **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** of the 51 wire centers. These data demonstrate that alternatives to Verizon's BLETS, OLETS and Bundled Services from wireline competitors are available and in widespread use by both residential and enterprise customers throughout the VNN region.

B. Mobile Telephony

The survey data presented by Mr. Newman shows that **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** of households in the VNN MSA purchase telephone service from mobile telephone companies.[47] Moreover, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][48]

While Mr. Newman's testimony does not provide data on business usage of mobile telephones specifically for the VNN MSA, it does indicate that the proportion of businesses in large MSAs (including the VNN MSA) which purchase mobile telephone service is 57.9 percent,[49] and that 17.7 percent of business respondents consider their mobile telephone to be their primary means of voice communication.[50]

These figures do not include mobile telephone customers who have dropped their wireline service altogether, as these customers were not eligible for the telephone survey. As Mr. West's testimony indicates, national estimates suggest that approximately six percent of residential customers have "cut the cord."[51]

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44. *See* Exhibit VA-21.
45. *See* Exhibit VA-20.
46. **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

47. *See* Exhibit VA-21.
48. *See id.*
49. *See* Exhibit VA-20.
50. *See id.*
51. *See* West Testimony at 65.

Again, these figures demonstrate that the mobile wireless alternatives available to consumers in the VNN MSA function as actual, viable alternatives to Verizon's BLETS, OLETS and Bundled Services.

C. Broadband and VoIP

The survey data presented by Mr. Newman show that **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][52]

To an even greater extent than in most regions, these data demonstrate the success of the cable companies (in this case, primarily Cox) in selling at least the second (data) leg of their triple play offerings, and demonstrate the nature of the current competitive "match up" between cable modem and DSL services in a region where both services are widely available. They help to explain why competition between firms offering bundles of services is extremely intense, why Cavalier is working to roll out television services, and why Verizon is deploying FiOS.

Also, the survey data presented by Mr. Newman show that in large MSAs in Virginia (including the VNN region), 73.5 percent of businesses subscribe to high-speed broadband service.[53]

These overall usage rates for broadband demonstrate that the broadband plus VoIP "build your own bundle" option is available today to **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** residential customers and three quarters of all businesses in the VNN MSA which are already signed up for broadband.

D. Overall Penetration of Wireline and Intermodal Competition

While it is not possible to estimate precisely the number of lines Verizon has lost to wireline and intermodal competitors, it is clear that competition is having a significant impact on Verizon's market share, both in terms of wireline telephony and the overall markets for BLETS, OLETS and bundled services, and that wireline competitors are winning a growing proportion of customers. The data also indicate that intermodal competitors are winning a growing proportion of customers from wireline carriers of all types (i.e., including both Verizon and the traditional CLECs and cable telephony providers).

Both Verizon's line count and its wireline market share in the VNN region are dropping rapidly. As indicated in Figure 1 below, between December 2003 and March 2006 (i.e., in 27 months), the ratio of Verizon lines to households fell from **[BEGIN CONFIDENTIAL]**

52. *See* Exhibit VA-21.
53. *See* Exhibit VA-20.
54. *See* Exhibit VNN-19.

[END CONFIDENTIAL][55]

During this same 27-month period, the number of residential wirelines served by wireline CLECs rose by **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][59]

Figure 1 also demonstrates the significance of intermodal competition from wireless telephony and from broadband plus VoIP "build you own" bundles. It shows that the ratio of combined Verizon and CLEC residential lines to households fell from **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][60] Assuming people have not stopped using voice telephony altogether, these data clearly indicate that wireless and broadband providers are competing effectively with both Verizon and other traditional wireline providers – a conclusion which is consistent with the high rates of wireless telephony usage and broadband adoption discussed above.

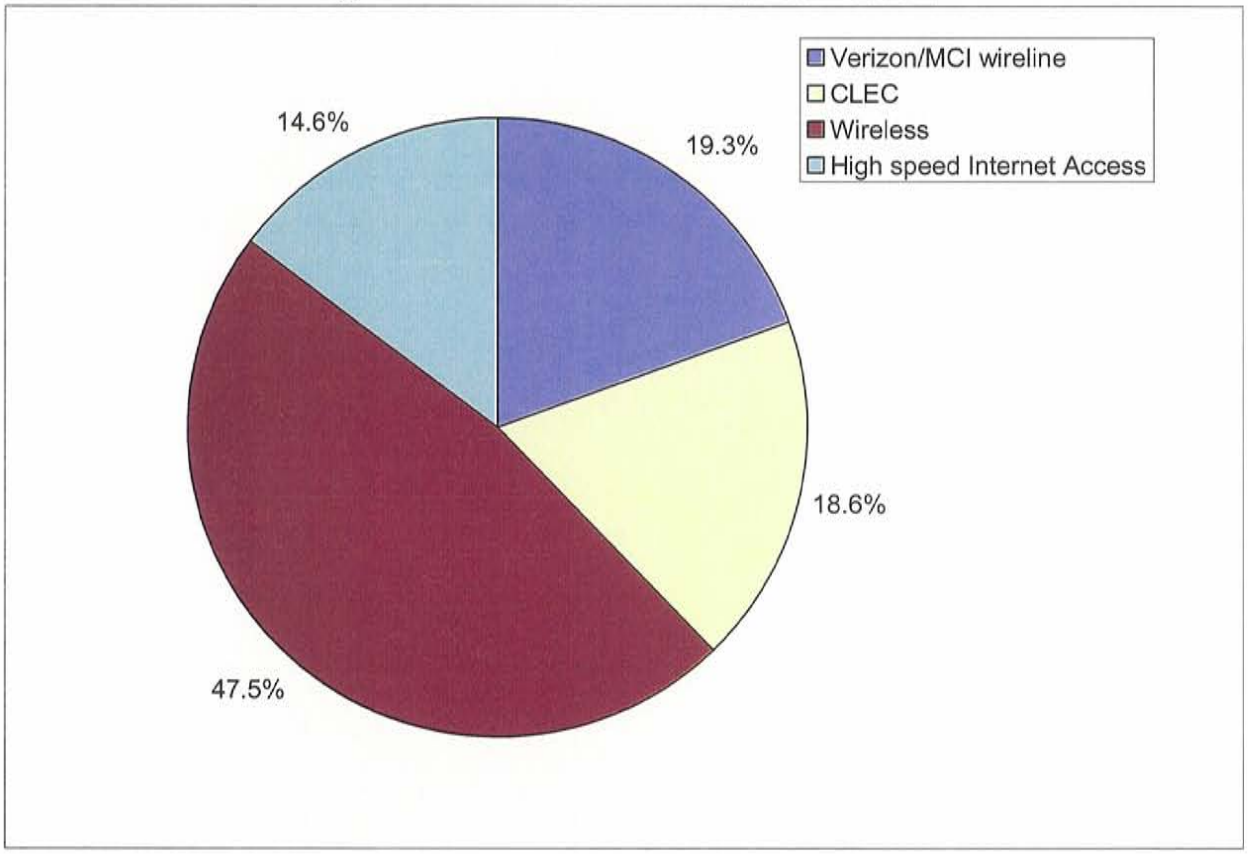
[BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]

55. *See id.*
56. *See id.*
57. *See id.*
58. *See id.*
59. *See id.*
60. *See id.*

Another perspective on Verizon's loss of overall share is shown in Figure 2 below, which shows the percentage of total connections – including wireline telephony, wireless telephony and broadband connections – served by Verizon, based on the survey conducted by Mr. Newman. As the figure shows, Verizon voice lines now account for only 19.3 percent of all wireline telephony, wireless telephony and broadband connections.[61]

Figure 2: Verizon Share of Total Connections



IV. POTENTIAL COMPETITION AND ENTRY

While it is clear from the evidence presented above that actual competition already in the marketplace is extensive, even in the absence of additional entry, it is equally clear that entry has occurred, is occurring and is likely to continue occurring in the future. Competition in the VNN MSA is thus certain to become even more intense in the coming months and years.

First, as noted above, Charter does not yet offer cable telephony in its franchise areas, but the company's infrastructure is fully digital and the company is committed to rolling out cable telephony in the next year.[62] Thus, Charter is set to enter the market for retail telephone services in a portion of the VNN region covering 6.8 percent of all households (that is, more than 41,000 households). Comcast passes an additional 3,995 households. Thus, more than 7.5 percent of

61. *See* Exhibit VA-22.

62. *See* West Testimony at 42.

households are passed by cable systems where cable telephony is likely to be deployed in the near future.

Second, Cavalier has recently obtained approval to offer its triple-play voice-data-video service in Williamsburg, and announced its intention to roll out this service to "the balance of Hampton Roads."[63] Cavalier's expansion throughout the area will further increase competitive pressures in the area. As Cavalier Vice President of Product Management and Marketing, Andy Lobred, put it, "the real winner [from Cavalier's entry] will be consumers who will have price and product choices not previously available."[64]

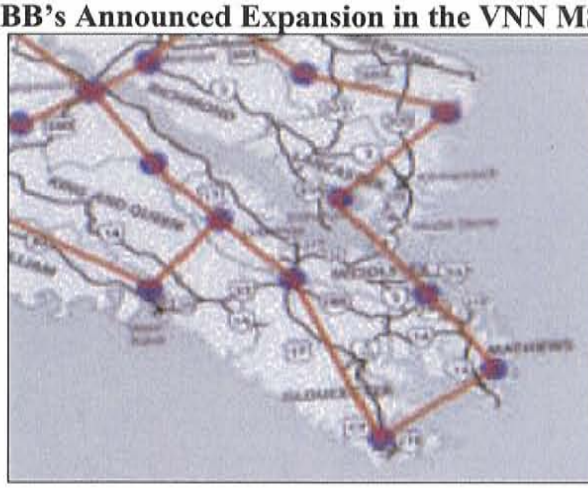
Other facilities-based CLECs are also in a position to rapidly expand their services in the VNN MSA in a timely fashion and with little or no additional investment. **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][65]

Non-facilities based companies, which provide services using resale and/or Wholesale Advantage services purchased from Verizon, are completely unconstrained in their ability to expand services. In the event of a price increase by Verizon, these companies could and would accommodate customers wishing to switch away from Verizon's services.

Furthermore, Virginia Broadband's announced expansion plan includes providing BLETS and OLETS services to Gloucester and Mathews counties, two of the most rural counties in the VNN Region, as shown in the exhibit below:

Figure 3:
VABB's Announced Expansion in the VNN MSA[66]



63. Press Release, Cavalier, Richmond-bases Communications Company expands into Williamsburg with its Digital TV Service (Oct. 17, 2006), *available at* http://www.cavtel.com/company/press/2006_10_17.shtml.
64. *See id.*
65. *See* Exhibit VNN-15.
66. *See* Virginia Broadband, http://www.vabb.com/goalcoveragearea.htm (last visited January 5, 2006).

More broadly, barriers to entry in the VNN MSA are extremely low. The VNN MSA has extensive access to high-capacity fiber optic cable from several providers, including Cavalier and Continental VisiNet.[67] The widespread presence of cell towers throughout the region (there are towers in 50 of the 51 wire center areas, and 49 new towers have been constructed since 2004) means that the mobile and fixed wireless entry is also inexpensive. Also, as a result of the large presence of military personnel in the region, population mobility is significantly higher than in most areas. The Census Bureau reports that five-year mobility rates for Newport News, Virginia Beach and Chesapeake between 1995 and 2000 were 55 percent, 54 percent and 52 percent, respectively, compared to a state-wide average of 48 percent. As a result, there is a high rate of built-in "churn" in the VNN Region, and new entrants have the opportunity to attract "new" customers rather than winning existing customers away from incumbent providers. This phenomenon also probably explains the relatively high proportion of customers **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** who view their wireless telephone as their primary telephone. Finally, while nearly all of the population in the VNN region lives in urban areas, a significant portion of the land area is rural, including areas such as Gloucester and Mathews Counties, and thus potentially eligible for funding from the RUS.

V. CONCLUSION

Competition for retail telephone services in the VNN MSA is intense and certain to become more intense in coming years. By every measure, Verizon is already losing customers to traditional CLECs, cable telephony providers, facilities-based CLECs and intermodal competitors at a rapid pace, and this decline is taking place *at current prices*. If Verizon were to raise prices, it would both accelerate the rate at which it is losing customers to existing competitive services, and increase the rate at which competitors and potential competitors deploy new services in the market.[68] The current state of competition is already adequate to regulate the price of Verizon's retail telephone services in this region, and continuing entry is certain to further erode its competitive position.

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67. *See* Eisenach Testimony at III.B. and Exhibit VA-18.

68. An analysis conducted by Mr. Taylor estimates that a decision by Verizon to raise prices by 5 percent in the VNN MSA would result in a *net* revenue loss of **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** annually. *See* Taylor Testimony. Table 14 at 94.

VNN-3

Wire Centers by Rate Group, Exchange, City and County

REGION	LOC ST	WIRECENTER	LOCATION NAME	Rate Group	Exchange	CENTRAL OFFICE CITY	COUNTY
VIRGINIA BEACH-NORFOLK-NEWPORT NEWS, VA-NC	VA-E	CHSKVACD	CHURCHLAND VA	08B	PORTSMOUTH	CHESAPEAKE	Portsmouth City
		CHSKVADC	DEEP CREEK VA	08B	PORTSMOUTH	CHESAPEAKE	Chesapeake City
		CHSKVAGU	GUERRIERE VA	08B	NORFOLK/VA BEACH	CHESAPEAKE	Chesapeake City
		DRVRVADR	DRIVER VA	08B	SUFFOLK	DRIVER	Suffolk City
		HMPNVAAB	ABERDEEN VA	08B	HAMPTON	HAMPTON	Hampton City
		HMPNVADC	DRUMMONDS VA	08B	HAMPTON/NPT NEWS/POQ	NEWPORT NEWS	Hampton City
		HMPNVAQN	QUEEN STREET VA	08B	HAMPTON	HAMPTON	Hampton City
		HMPNVAWD	WOODLAND VA	08B	HAMPTON	HAMPTON	Hampton City
		NRFLVABL	BRICKELL VA	08B	NORFOLK/VA BEACH	NORFOLK	Norfolk City
		NRFLVABS	BUTE VA	08B	NORFOLK/VA BEACH	NORFOLK	Norfolk City
		NRFLVAGS	GRANBY STREET VA	08B	NORFOLK/VA BEACH	NORFOLK	Norfolk City
		NRFLVAOD	OLD DOMINION UNIV VA	08B	NORFOLK/VA BEACH	NORFOLK	Norfolk City
		NRFLVAOV	OCEAN VIEW VA	08B	NORFOLK/VA BEACH	NORFOLK	Virginia Beach City
		NRFLVASP	SEWELLS POINT VA	08B	NORFOLK/VA BEACH	NORFOLK	Norfolk City
		NRFLVAWC	WEST LITTLE CREEK VA	08B	NORFOLK/VA BEACH	NORFOLK	Norfolk City
		NWNWVAHU	HUNTINGTON VA	08B	NEWPORT NEWS	NEWPORT NEWS	Newport News City
		NWNWVAHV	HARPERSVILLE VA	08B	NORFOLK/VA BEACH	NEWPORT NEWS	Newport News City
		NWNWVAJF	JEFFERSON VA	08B	PENINSULA	NEWPORT NEWS	Newport News City
		NWNWVAND	NETTLES DRIVE VA	08B	NPT NEWS/PENINSULA	NEWPORT NEWS	Newport News City
		NWNWVAYK	YORKTOWN VA	08B	PENINSULA	NEWPORT NEWS	Newport News City
		PTMOVAHF	HODGES FERRY VA	08B	PORTSMOUTH	PORTSMOUTH	Portsmouth City
		PTMOVAHS	HIGH STREET VA	08B	PORTSMOUTH	PORTSMOUTH	Portsmouth City
		SFFLVASK	SUFFOLK VA	08B	SUFFOLK	SUFFOLK	Suffolk City
		TOANVATO	TOANO VA	07	TOANO	TOANO	James City
		VRBHVACC	CHINESE CORNER VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVACT	CENTERVILLE TNPK. VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVAGN	GREAT NECK VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVAIL	INDIAN LAKES VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVAIR	INDIAN RIVER VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVAPT	PLAZA TRAIL VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVARC	ROBBINS CORNER VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVASR	SALEM ROAD VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		VRBHVAVB	VIRGINIA BEACH (32ND) VA	08B	NORFOLK/VA BEACH	VIRGINIA BEACH	Virginia Beach City
		WHVLVAWH	WHALEYVILLE VA	08B	WHALEYVILLE	SUFFOLK	Suffolk City
		WLBGVAWM	WILLIAMSBURG VA	07	WILLIAMSBURG	WILLIAMSBURG	Williamsburg City
	VA-S	CHKTVAXA	CHUCKATUCK	10	CHUCKATUCK	CHUCKATUCK	Suffolk City
		CLMTVAXA	CLAREMONT	09	CLAREMONT	CLAREMONT	Surry
		CRTDVAXA	CRITTENDEN	10	CRITTENDEN	CRITTENDEN	Isle of Wight
		DNDRVAXA	DENDRON	06	DENDRON	DENDRON	Surry
		GLCSVAXA	GLOUCESTER	10	GLOUCESTER	GLOUCESTER	Gloucester
		GRBRVAXA	GREAT BRIDGE	10	GREAT BRIDGE	GREAT BRIDGE	Chesapeake City
		GRBRVAXB	BATTLEFIELD	10	GREAT BRIDGE	BATTLEFIELD	Chesapeake City
		HAYSVAXA	HAYES	09	HAYES	HAYES	Gloucester
		HCKRVAXA	HICKORY	10	HICKORY	HICKORY	Chesapeake City
		HLLDVAXA	HOLLAND	10	HOLLAND	HOLLAND	Suffolk City
		MTHWVAXA	MATHEWS	07	MATHEWS	MATHEWS	Mathews

Wire Centers by Rate Group, Exchange, City and County

REGION	LOC ST	WIRECENTER	LOCATION NAME	Rate Group	Exchange	CENTRAL OFFICE CITY	COUNTY
		PRANVAXA	PRINCESS ANNE	10	PRINCESS ANNE	PRINCESS ANNE	Virginia Beach City
VIRGINIA BEACH-NORFOLK-NEWPORT NEWS, VA-NC	VA-S	PUNGVAXA	PUNGO	10	PRINCESS ANNE	PUNGO	Virginia Beach City
		SMFDVAXA	SMITHFIELD	10	SMITHFIELD	SMITHFIELD	Isle of Wight
		SRRYVAXA	SURRY	10	SURRY	SURRY	Surry
		WNDSVAXA	WINDSOR	10	WINDSOR	WINDSOR	Isle of Wight

VNN-4

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EXHIBIT VNN-4

VNN-5

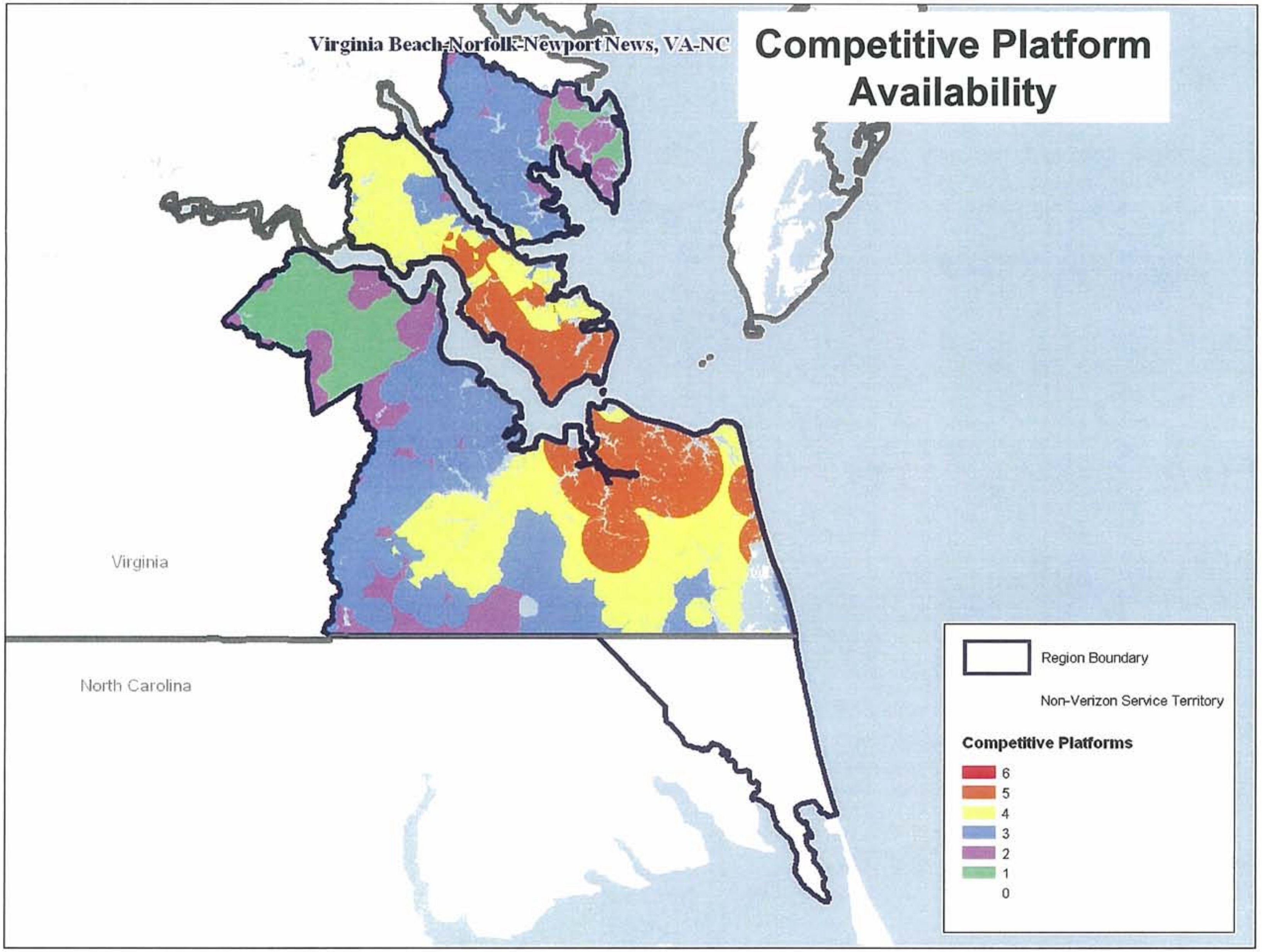


Exhibit VNN-5

VNN-6

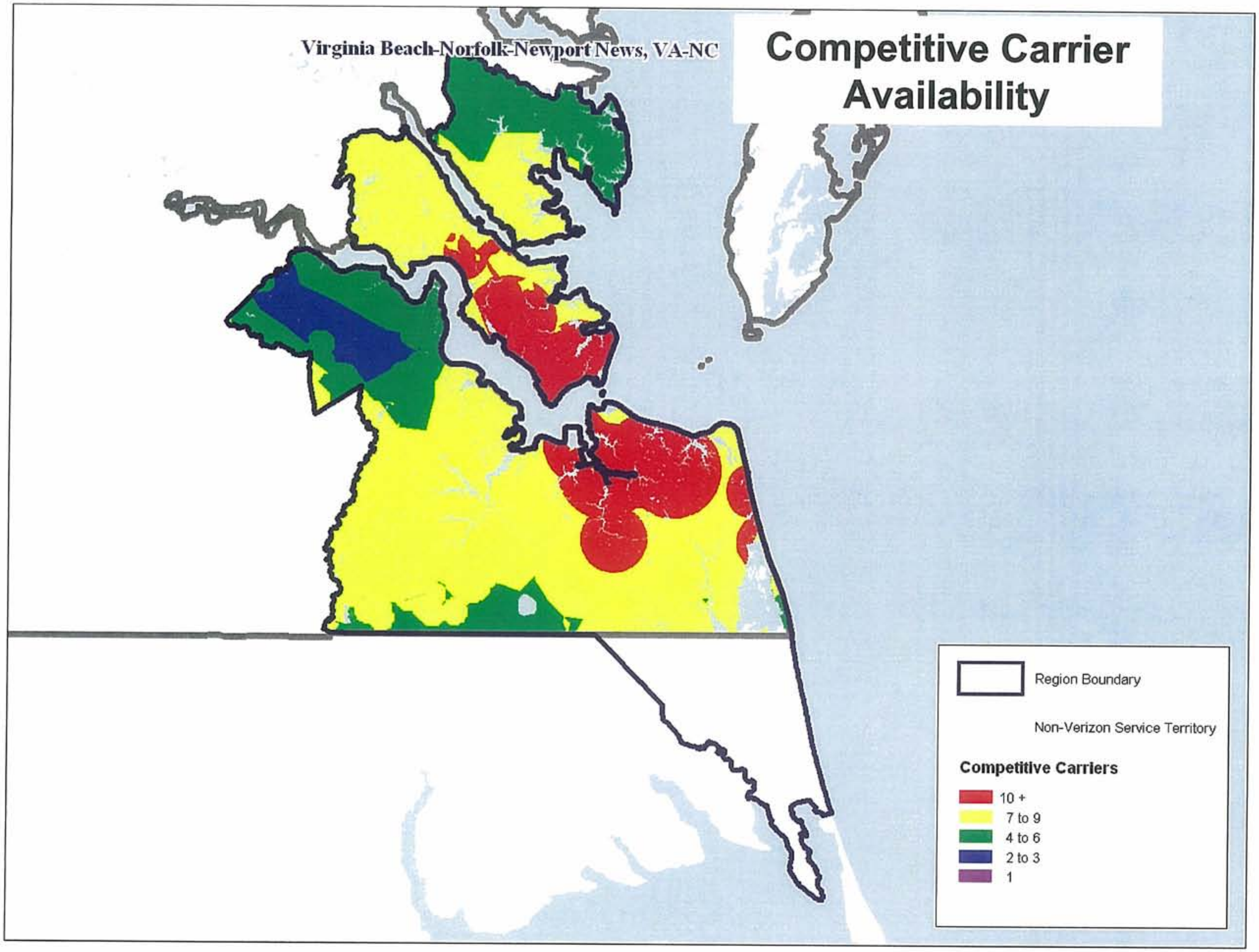


Exhibit VNN-6

VNN-7

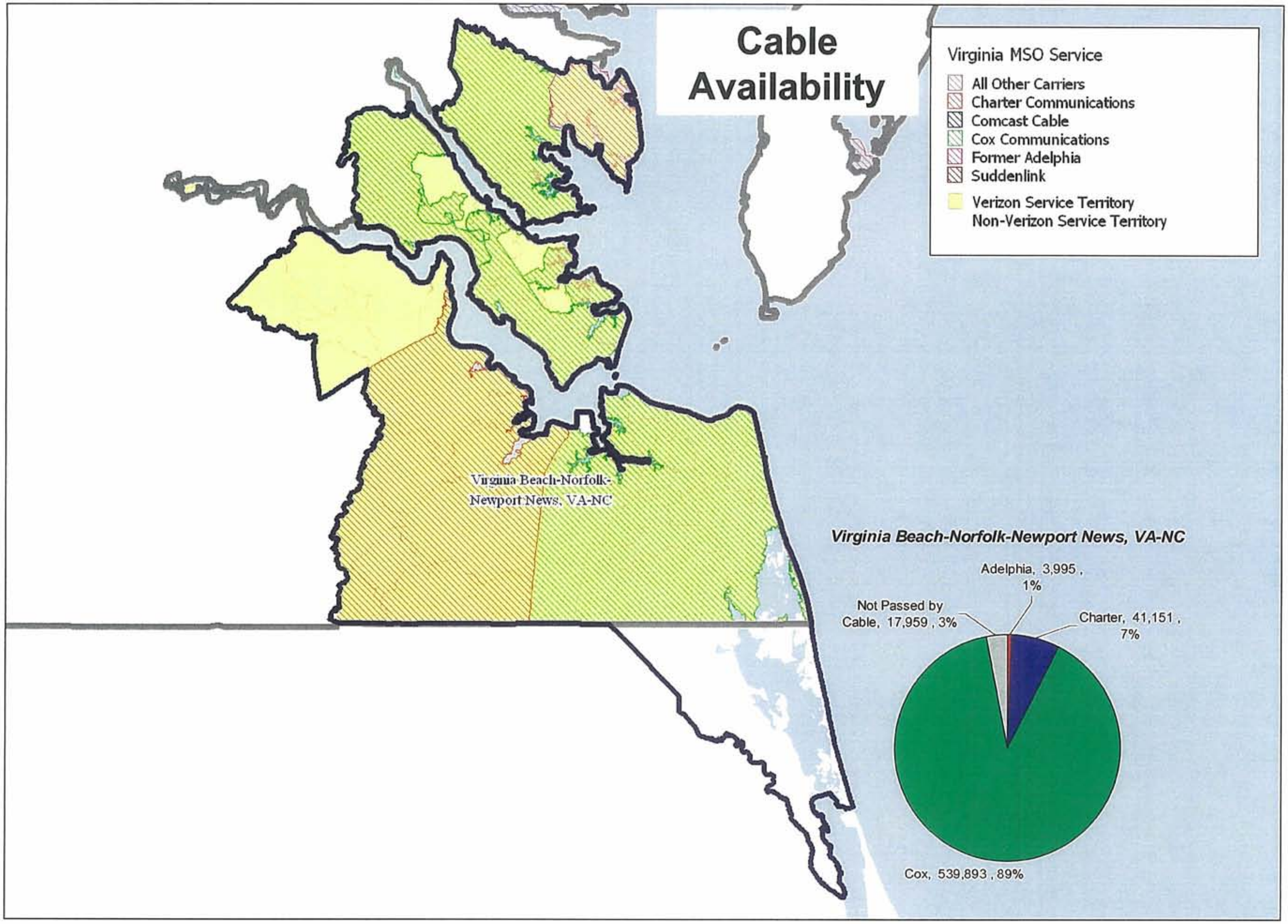


Exhibit VNN-7

Note: HH numbers reflect only those households in Verizon's Service Territory

VNN-8

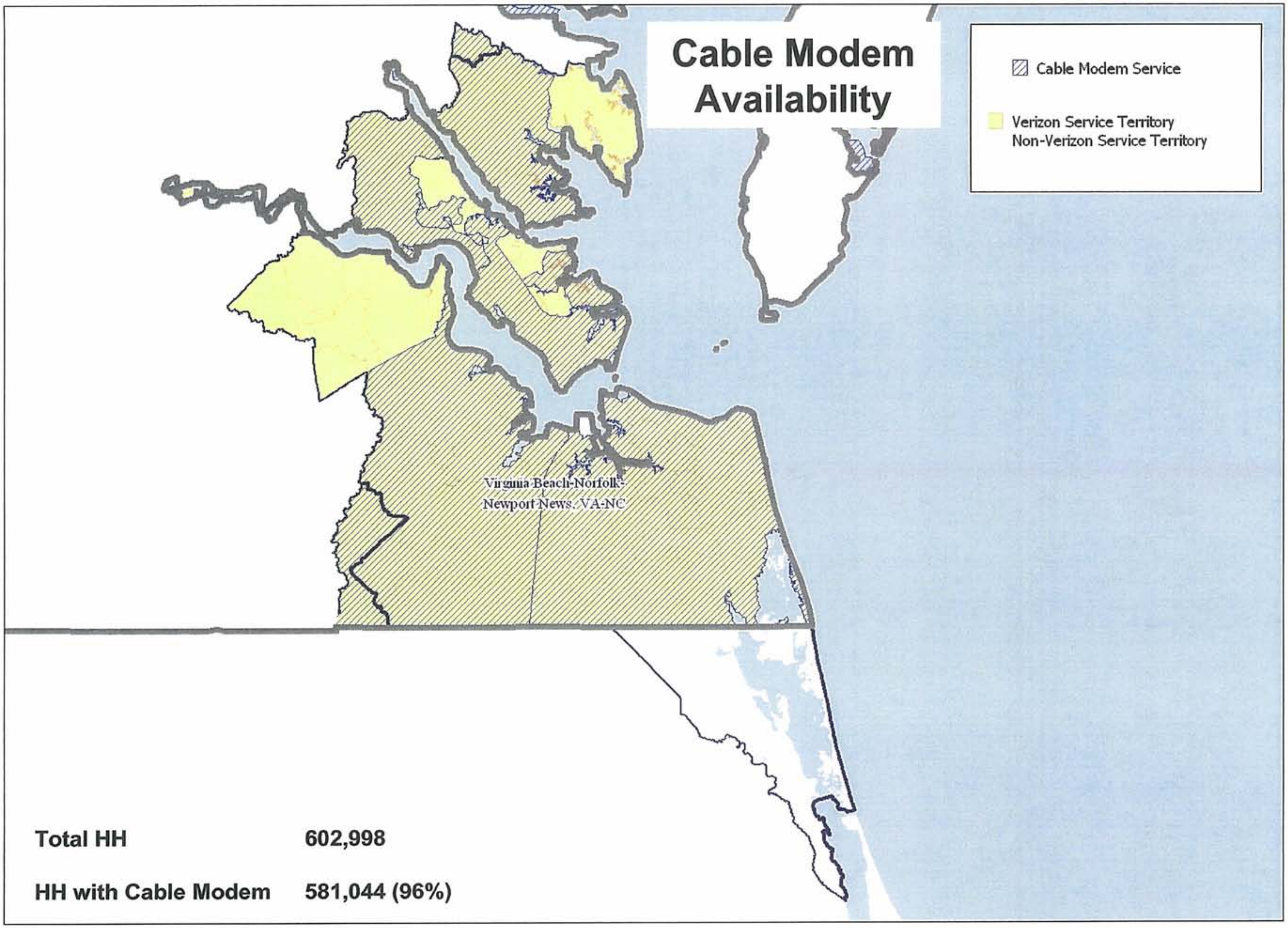


Exhibit VNN-8

Note: HH numbers reflect only those households in Verizon's Service Territory

VNN-9

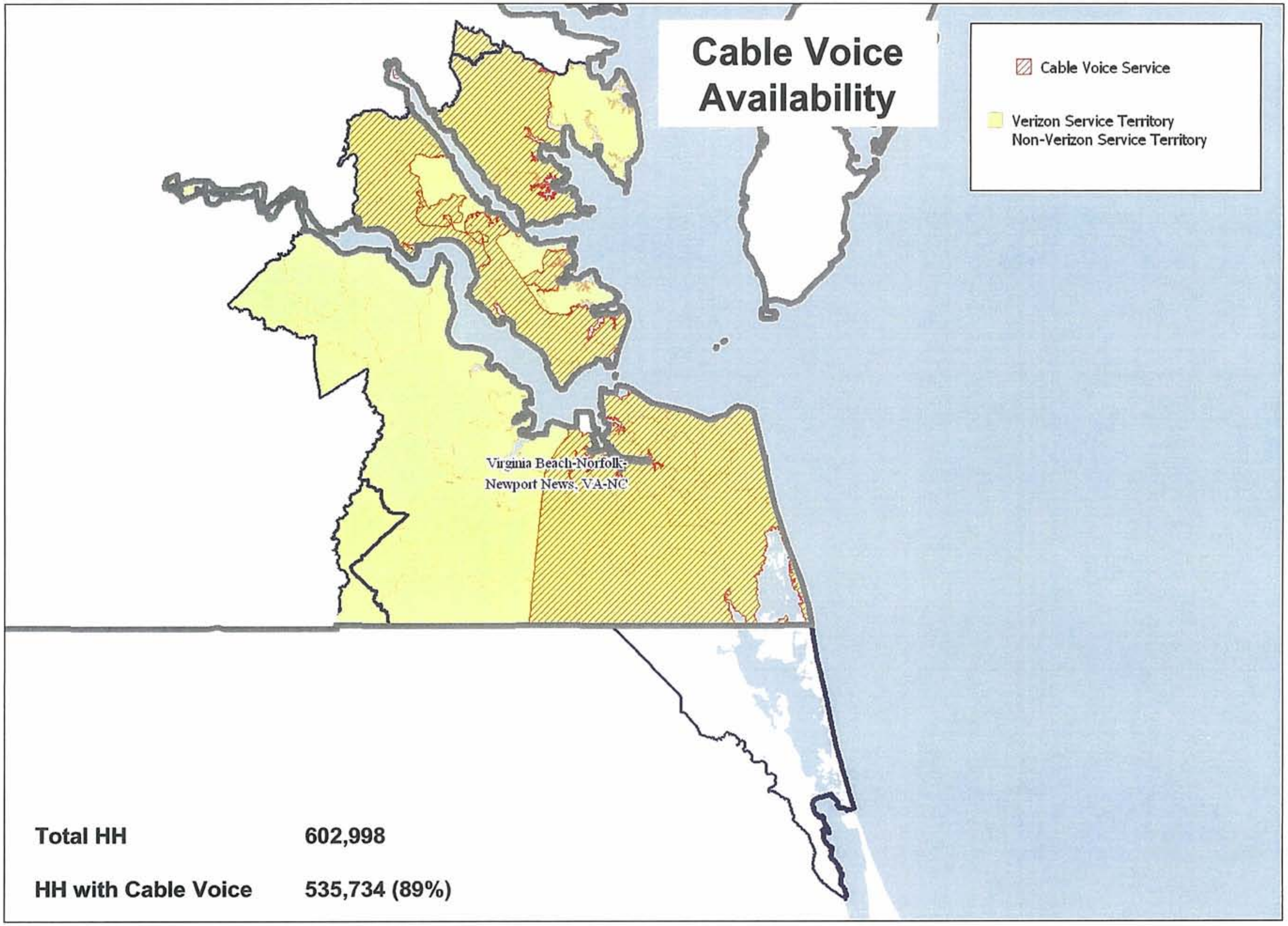


Exhibit VNN-9

Note: HH numbers reflect only those households in Verizon's Service Territory

VNN-10

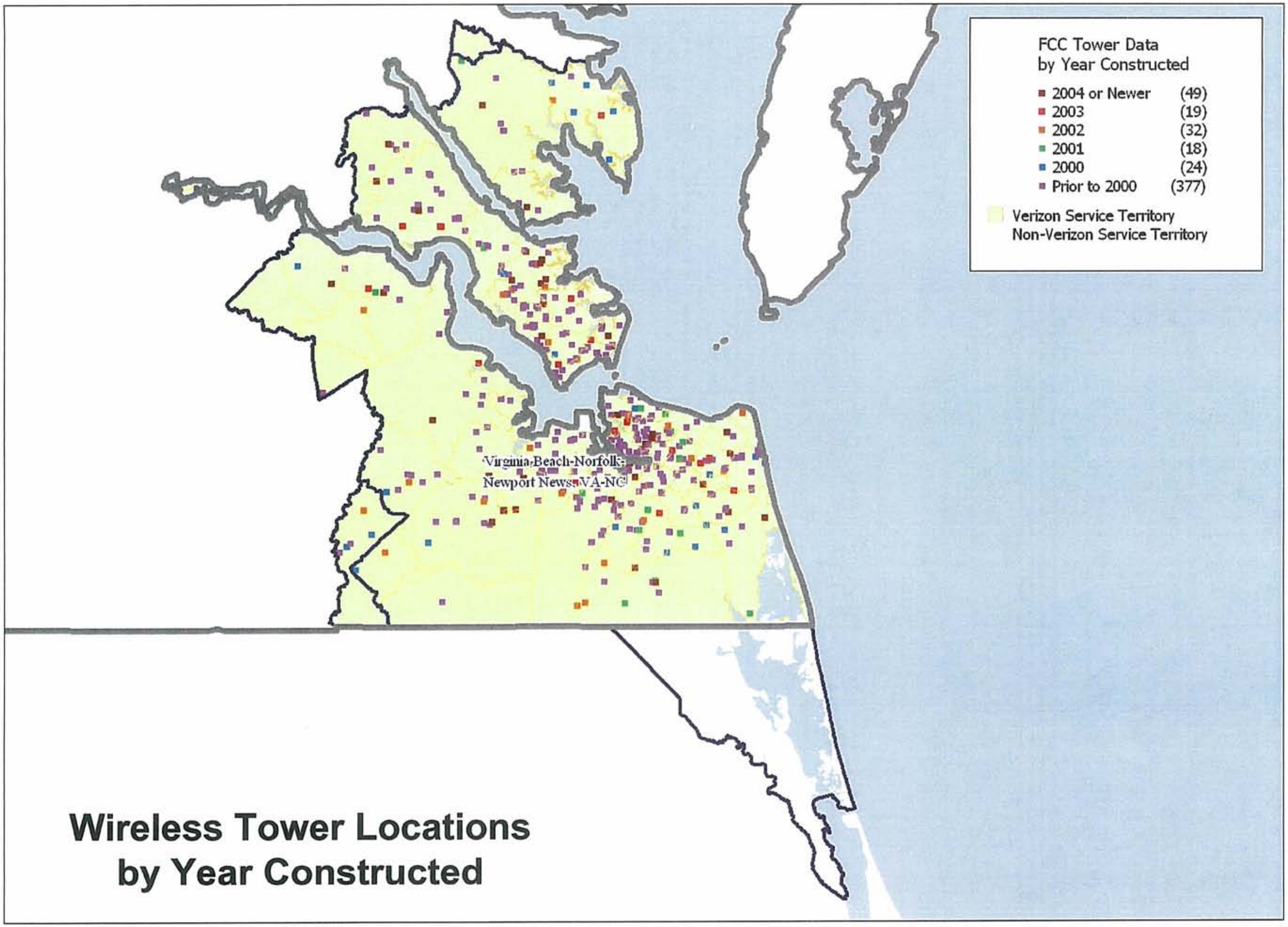
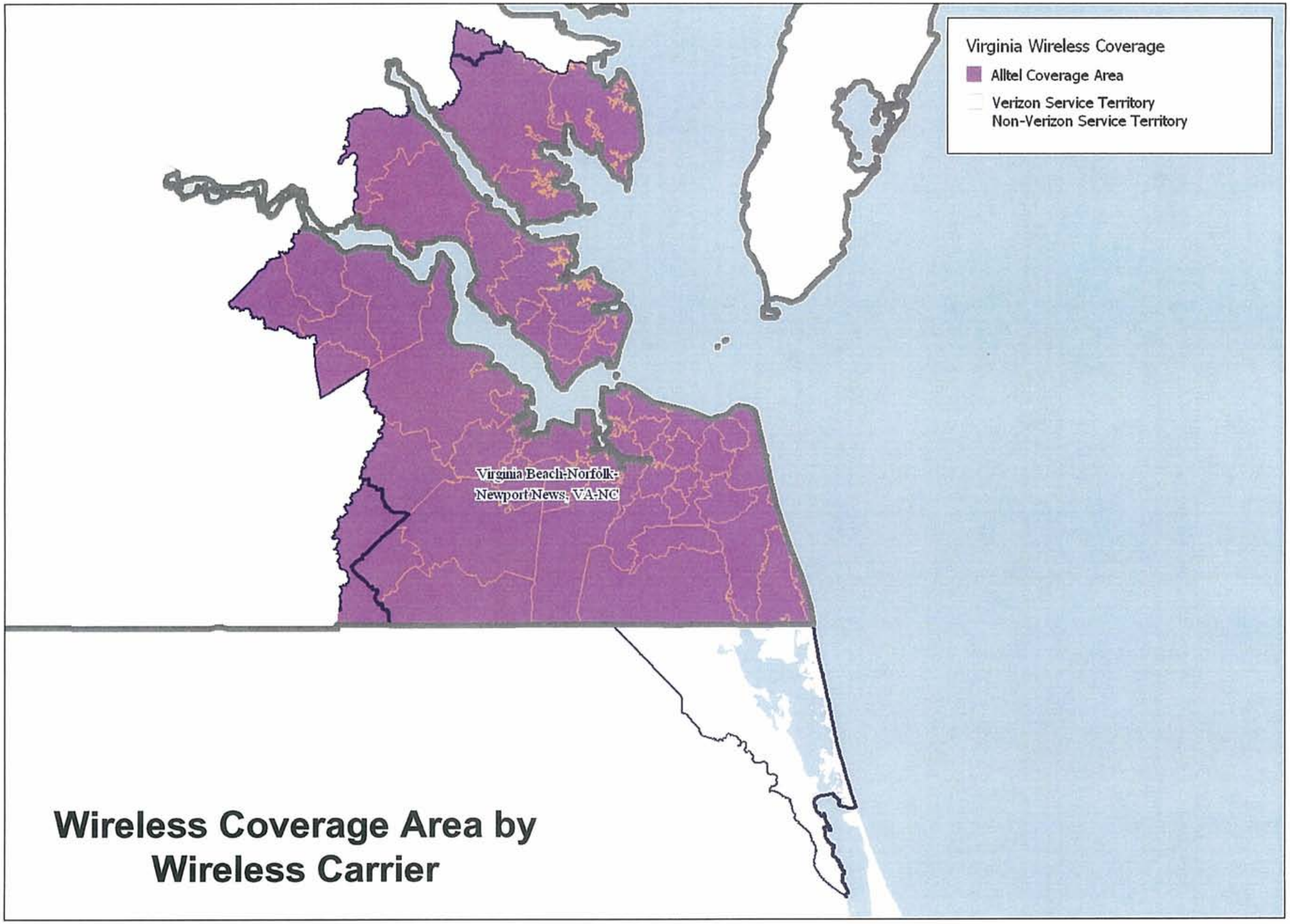


Exhibit VNN-10

VNN-11



Wireless Coverage Area by Wireless Carrier

Exhibit VNN-11, page 1 of 6

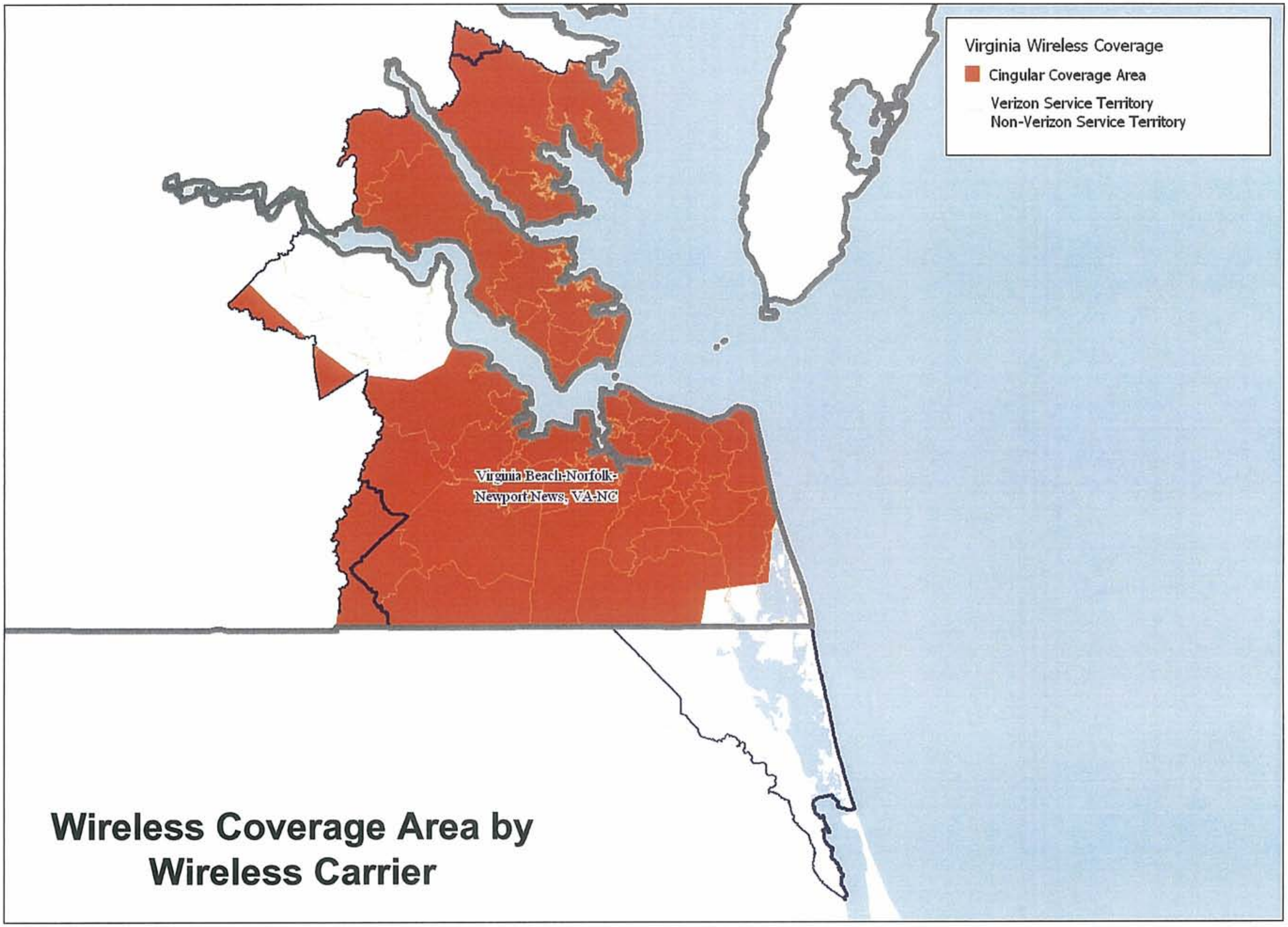


Exhibit VNN-11, page 2 of 6

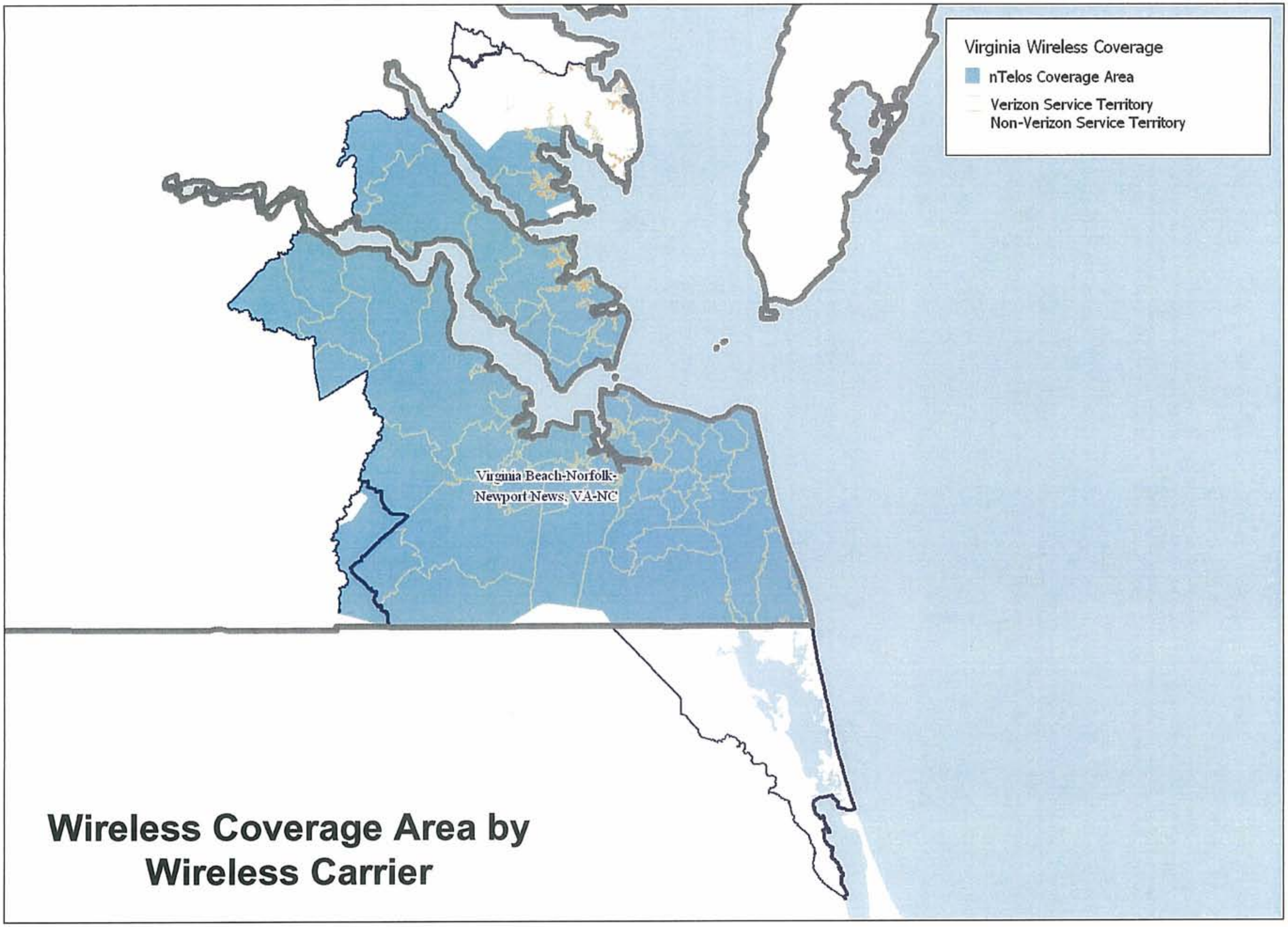


Exhibit VNN-11, page 3 of 6

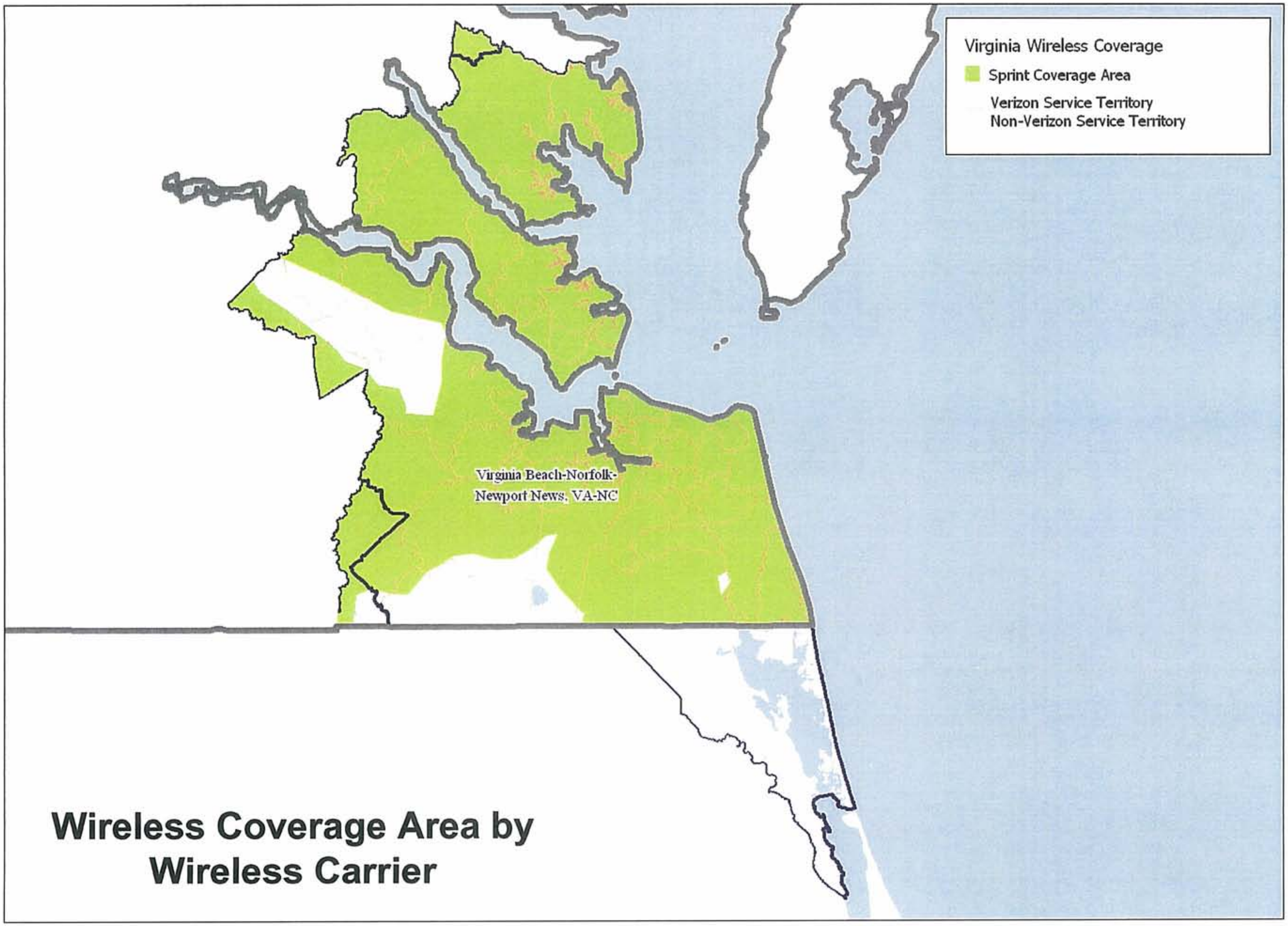


Exhibit VNN-11, page 4 of 6

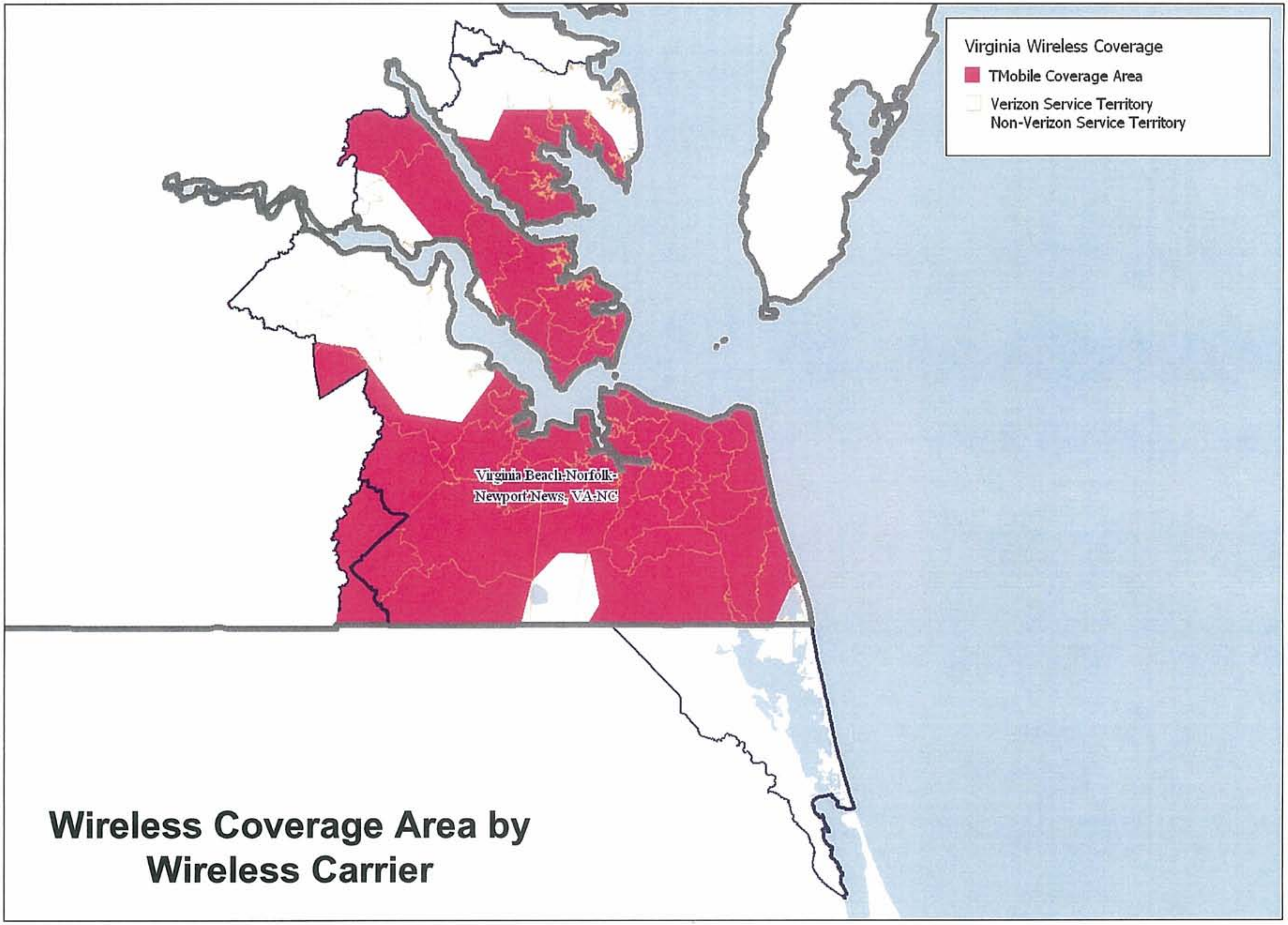


Exhibit VNN-11, page 5 of 6

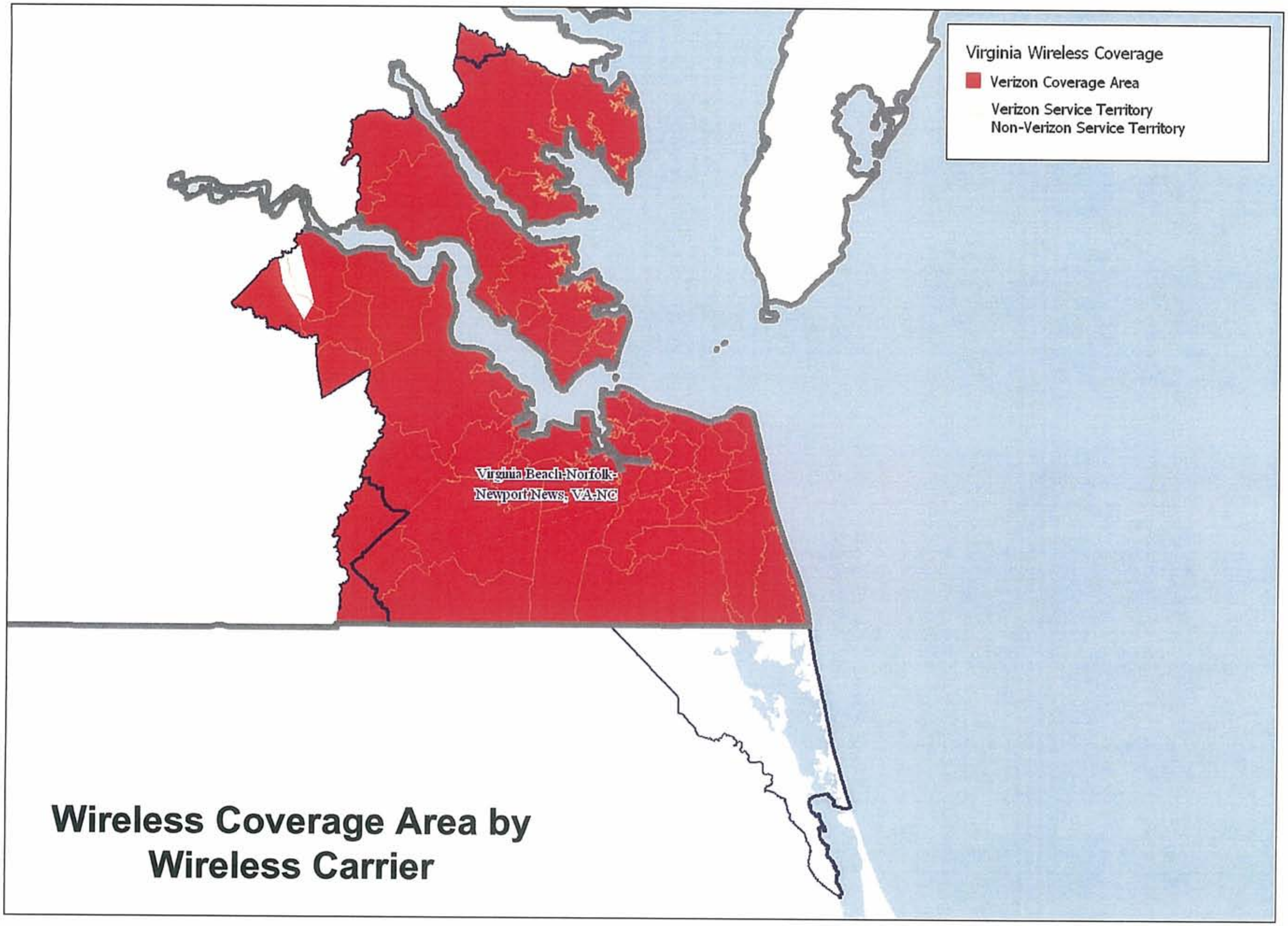
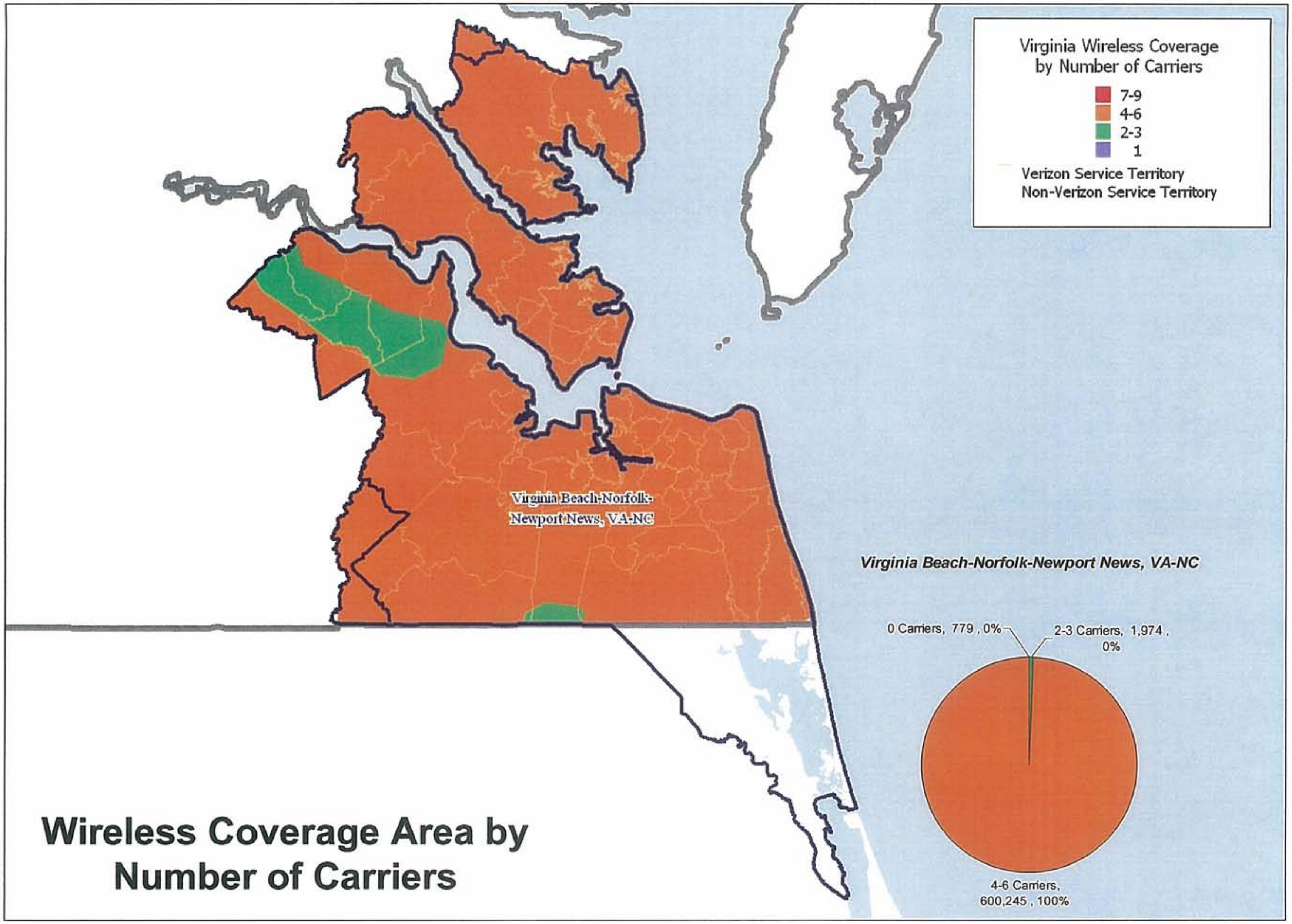


Exhibit VNN-11, page 6 of 6

VNN-12

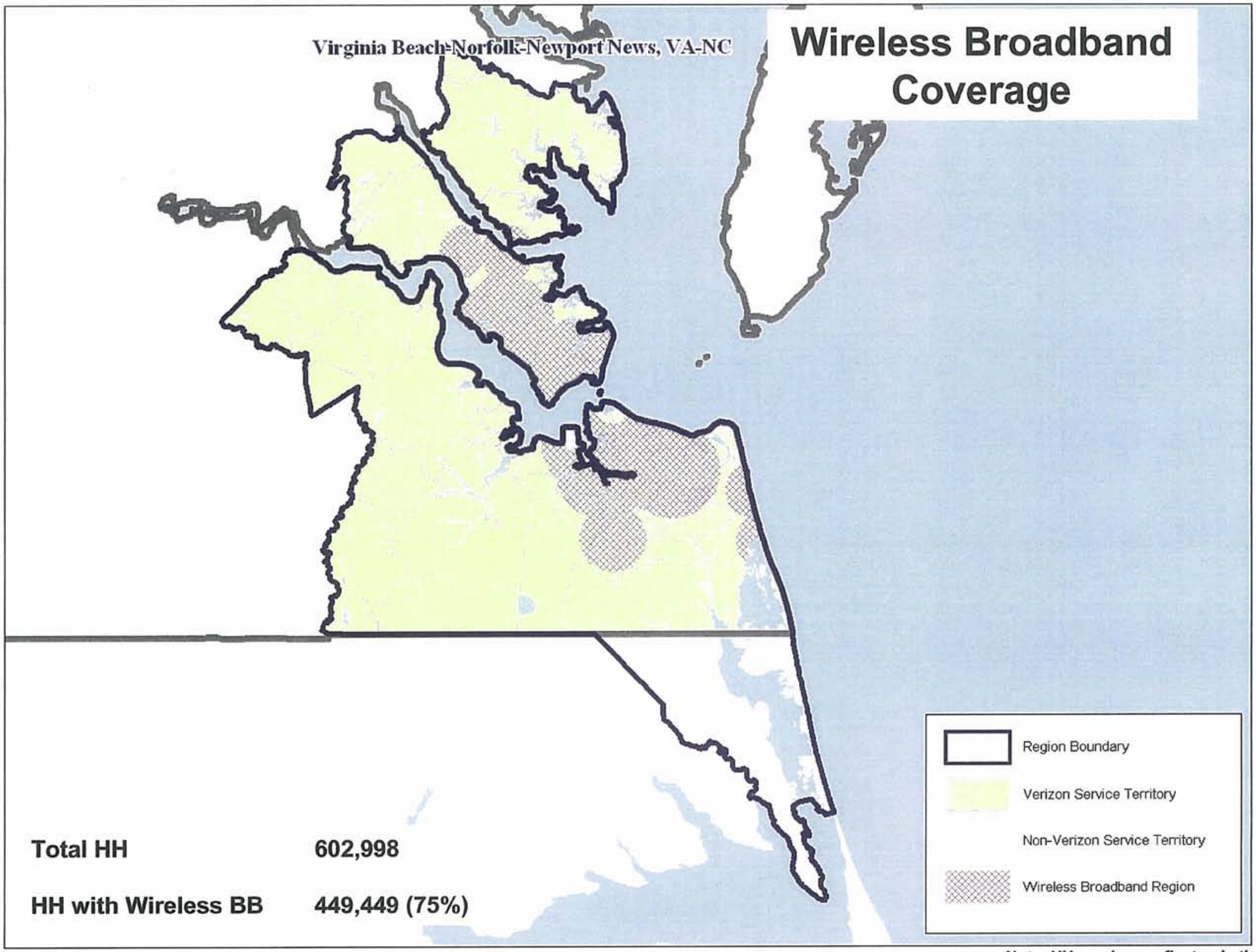


Wireless Coverage Area by Number of Carriers

Exhibit VNN-12

Note: HH numbers reflect only those households in Verizon's Service Territory

VNN-13



Note: HH numbers reflect only those households in Verizon's Service Territory

Exhibit VNN-13

VNN-14

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EXHIBIT VNN-14

VNN-15

CONFIDENTIAL

EXHIBIT VNN-15.

VNN-16

CONFIDENTIAL

EXHIBIT VNN46

VNN-17

CONFIDENTIAL

EXHIBIT VNN-17

VNN-18

CONFIDENTIAL

EXHIBIT VNN-18

VNN-19

CONFIDENTIAL

EXHIBIT VNN-19